RECENT UPDATES TO THE SOYBEAN GENOMICS AND MICROARRAY DATABASE (SGMD).

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Abstract:

The soybean genomics and microarray database (SGMD) was established in 1999 to serve as a sequence and microarray database for the Soybean Genomics and Improvement Laboratory (SGIL), Beltsville Agricultural Research Center (BARC) and collaborators. It serves both as a sequence repository, holding DNA sequences for numerous EST's, and also as a microarray experiment database. EST sequences stored in SGMD include cDNA's derived from soybean roots infected to soybean cyst nematodes and cDNA's derived from soybean cyst nematodes obtained through the NSF-funded nematode EST project. SGMD allows scientists to explore the expression levels of the EST clones in roots of susceptible and resistant soybean cultivars infected with the soybean cyst nematode, and to correlate expression levels with function. SGMD is a relational database built on SQLServer2000 and incorporates the minimal information about a microarray experiment (MIAME) guidelines set forth by the microarray gene expression database (MGED) group. Recent updates to the database are discussed, which include updates to the database structure, the data that it contains and the new web sites and user interfaces that have been developed recently. Among the many updates to SGMD is the inclusion of a Soybean Cyst Nematode (SCN) database and the addition of time series microarray experiments and web based interfaces to query the data across the time points and/or between experiments. SGMD can be accessed from http://bldg6.arsusda.gov/benlab.